ABSTRACT OF THE DISCLOSURE

The invention provides an ATM switch which realizes hierarchical shaping for each virtual channel and each virtual path with a simple configuration. Cells are sent from cell buffers of an ATM core switch by FIFO operation to output side connection information application sections of output side circuit interfaces. In each of the output side circuit interfaces, the output side connection information application section acquires connection information such as a service class based on an intra-switch connection identification number applied to each cell and applies the connection information to the cell. An output cell buffer queues cells for each virtual channel. A VC cell rate control section reads out cells from the output cell buffer in accordance with the connection information and performs traffic priority control and rate control of the cells to be outputted. Cells of each virtual channel are outputted at a rate equal to or higher than a minimum cell rate but equal to or lower than a peak cell rate in accordance with a VP cell rate control signal representative of the cell storage amount in a VP cell rate control section in the following stage. The VP cell rate control section queues cells into a buffer for each virtual path and performs traffic priority control and rate control of the cells.